

KOMPANEYETS, A.S.

Quantum electrodynamics involving two fermions. Zhur.  
eksp. i teor.fiz. 49 no.6:1781-1788 D '65.

(MIRA 19:1)

1. Institut khimicheskoy fiziki AN SSSR. Submitted April 1,  
1965.

KOMFANEYETS, A.S., prof.

Superconductivity at high temperatures. Priroda 54 no.10:2-11 '65.  
(MIRA 18:10)

1. Institut khimicheskoy fiziki AN SSSR, Moskva.

KOMPANEYETS, A.S.; MOSHKINA, R.I.

Chain termination on the surface with allowance for the diffusion  
of two active centers. Dokl. AN SSSR 160 no.5:1117-1120 F '65.

(MIRA 18:2)

1. Institut khimicheskoy fiziki AN SSSR. Submitted August 10, 1964.

L 23164-66 EIT(m)/I

ACC NR: AP6002718

SOURCE CODE: UR/0056/65/049/006/1781/1788

AUTHOR: Kompaneys, A. S.

ORG: Institute of Chemical Physics, Academy of Sciences, SSSR (Institut khimicheskoy fiziki Akademii nauk SSSR)

TITLE: Quantum electrodynamics with two fermions 19, 44, 55

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 6, 1965, 1781-1788

TOPIC TAGS: quantum electrodynamics, electron, fermion, Mu meson, approximation convergence, fine structure, Green function

ABSTRACT: For the purpose of modifying quantum electrodynamics in a way as to be able to formulate it without introducing fields of a nonelectric nature, the author proposes a procedure wherein the integrals arising from the electron and muon loops are not subtracted but added. As a result, all the divergent expressions in any order approximation with respect to the fine structure constant cancel out, and only finite expressions remain, connected with the elimination of the gauge invariant part and charge renormalization. To make such a procedure possible, it is necessary to forego in part the Lagrangian formalism of quantum electrodynamics. When

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ACC NR: AP600271<sup>a</sup>

2

this is done, and two fermions are taken into account, it becomes possible to formulate the equations so that no infinite expressions appear in them. The basic equations are assumed to be the Dyson equations for the Green's functions of the fermion and of the quark. Both fermions appear in the theory in symmetric manner, and both are physical. An equation is obtained for the ratio of their masses. The radiative corrections for the photon Green's functions and for the vertex part are also calculated. Author thanks L. A. Kruzhkova for help with the calculation and for a discussion of the results, and I. S. Shapiro at whose suggestion the appendix was written. Orig. art. has: 24 formulas.

SUB CODE: 20/ SUBM DATE: 01Apr65/ ORIG REF: 002/ OTH REF: 002

Card 2/2

L 8786-65 EWT(1)/EPA(b)/FS(v)-3/ENG(v)/ZNA(d) Po-4/Po-5, Po-4/Po-4 ASD(a)-1/  
 KAPIC(a)/ESD(L)/Pb-4 CW

IN NR: AP4043491

8/0293/4-0004/0532/0538<sup>8</sup>

Aleksakhin, I. V.; Kompaniyets, E. I.; Kravtsov, A. A.

ates of one-day artificial Earth satellites

Kosmicheskiye issledovaniya, v. 2, no. 4, 1964, 532-538

... Earth satellite ... parameters

... sections on the ...  
 ... artificial Earth satellite ...  
 ... the satellite ...  
 ... of the Earth ...  
 ... equal ...

... ..

... geographical longitude ...  
 ... orbit, ...  
 ... orbit. With this ...



ARNAUTOV, V.T.; BARANOV, V.M.; DONSKOY, S.A.; PASTUKHOV, A.I.; SMIRNOV, L.A.;  
TORSHILOV, Yu.V.; TRET'YAKOV, M.A.; UDOVENKO, V.G.; FREYDENZON, Ye.Z.;  
SHCHEKALEV, Yu.S.; Prinsipali uchastiye: MAKAYEV, S.V.; KOMPANIYETS,  
G.M.; NAGOVITSYN, D.F.; NOVOLODSKIY, P.I.; VARSHAVSKIY, V.L.;  
KOROGODSKIY, V.G.; KLIBANOV, Ye.L.; MEDVEDEVSKIKH, Yu.; TALANTSEVA,  
T.I.; DUBROV, N.F.; DZEMIAN, S.K.; TOPYCHKANOV, B.I.; CHARUSHNIKOV,  
O.A.; KHARITONOV, Yu.A.

Developing and mastering the technology of converting vanadium  
cast iron in oxygen-blown converters with a 100 ton (Mg) capacity.  
Stal' 25 no.6:504-508 Je '65. (MIRA 18:6)

1. Nizhne-Tagil'skiy metallurgicheskiy kombinat (for Makayev, Kompaniyets, Nagovitsyn, Novolodskiy, Varshavskiy, Korogodskiy, Klibanov, Medvedevskikh, Talantseva). 2. Ural'skiy nauchno-issledovatel'skiy institut chenykh metallov (for Dubrov, Dzemyan, Topychkanov, Charushnikov, Kharitonov).



KOMFANIYETS, G.M.; SHMONIN, I.A.

New developments in research. 'Stal' 25 no.3:263 Mr '65.

New developments in research. Ibid. 1283

(MIRA 18:4)

21c  
L 18316-65 EWO(j)/EWT(1)/EWP(e)/EWO(k)/EWT(m)/EPP(c)/EPP(n)-2/EPR/EEC(b)-2/EWP(b)  
Pz-6/Pr-4/Ps-4/Pu-4 IJP(c)/APWL/SSD WW/AT/WH  
S/0089/64/017/005/0329/0335  
ACCESSION NR: AP4049532

AUTHOR: Millionshchikov, M. D.; Gverdtsiteli, I. G.; Abramov, A. S.; Gorlov, L. V.; Gubanov, Yu. D.; Vefremov, A. A.; Zhukov, V. F.; Ivanov, V. Ye.; Kovy\*rzin, V. K.; Koptelov, Ye. A.; Kosovskiy, V. G.; Kukharkin, N. Ye.; Kucherov, R. Ya.; Laly\*kin, S. P.; Merkin, V. I.; Nechayev, Yu. A.; Pozdnyakov, B. S.; Ponomarev-Stepnov, N. N.; Samarin, Ye. N.; Serov, V. Ya.; Usov, V. A.; Fedin, V. G.; Yakovlev, V. V.; Yakutovich, M. V.; Khodakov, V. A.; Kompaniyets, G. V.

TITLE: The "Romashka" high-temperature reactor-converter /9

SOURCE: Atomnaya energiya, v. 17, no. 5, 1964, 329-335

TOPIC TAGS: nuclear power reactor, reactor feasibility study, research reactor, thermoelectric converter/Romashka

ABSTRACT: The authors briefly describe the construction, parameters, test results, and operating experience of the "Romashka" reactor-

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L 18316-65  
ACCESSION NR: AP4049532

converter unit, which has been in operation at the Kurchatov Atomic Energy Institute since August 1964. The fuel used is uranium dioxide enriched to 90%  $U^{235}$ . Graphite and beryllium are used as reflectors. Electricity is generated by silicon-germanium semiconductor thermocouples distributed on the outer surface of the reflector and connected in four groups which can be connected in series or in parallel. The temperatures of the active zone and outer surface are 1770 and 1000C, respectively. The power ratings are 0.50-0.80 kW electric and 40 kW thermal, the maximum current (parallel connection) is 88 A, the neutron flux is  $10^{13}$  neut/cm<sup>2</sup> sec in the center of the active zone and  $7 \times 10^{12}$  on its boundary. The reactor has a negative temperature reactivity coefficient. The equipment has high inherent stability and requires no external regulator, and little change was observed in the thermocouple properties after 2500 hours of operation. Tests on the equipment parameters are continuing, and the results are being analyzed for use in future designs. Orig. art. has: 3 figures and 1 formula.

Card 2/3

MILLIONSHCHIKOV, M.D.; GVERDTSITELI, I.G.; ABRAMOV, A.S.; GORLOV, L.V.;  
GUBANOV, Yu.D.; YEFREMOV, A.A.; ZHUKOV, V.P.; IVANOV, V.Ye.;  
KOVYRZIN, V.K.; KOPELOV, Ye.A.; KOSOVSKIY, V.G.; KUKHARKIN,  
N.Ye.; KUCHEROV, R.Ya.; LALYKIN, S.P.; MERKIN, V.I.; NECHAYEV,  
Yu.A.; POZDNYAKOV, B.S.; PONOMAREV-STEPNOY, N.N.; SAMARIN, Ya.N.;  
SEROV, V.Ya.; USOV, V.A.; FEDIN, V.G.; YAKOVLEV, V.V.; YAKUTOVICH,  
M.V.; KHODAKOV, V.A.; KOMPANIYETS, G.V.

High-temperature reactor-converter "Romashka." Atom. energ.  
17 no.5:329-335 N '64. (MIRA 17:12)

ANTONENKO, I.; KOMPANIVETS, I.

Creating new agricultural machinery and a bonus system for designers.  
Sov. Ind 6 no.12:12/1966 D '61. (MIRA 14:11)

1. Mashinostroi special'nogo konstruktorskogo byuro, glavnyy  
konstruktor zavoda "Krasnaya Zvezda" (for Antonenko).  
(Leningrad--Agricultural machinery industry--Technological innovations)  
(Bonus system)

ANTONENKO, I.A., inzh.; KOMPANIYETS, I.A., inzh.

The SKNK-5 check-row combined drill. Mashinostroenie no.53  
76-77 S-0 '64 (MIRA 18:2)

KOMPANEYETS, I. M.

Kompanyets, I. M. -- "Experimental Study of the Movement of Granular Materials in Pipes and Chambers of Various Kinds." Cand Tech Sci, Power Engineering Inst, Acad Sci USSR. (Referativnyy Zhurnal--Khimiya, No 1, Jan 54)

SO: SUM 168, 22 July 1954

*KOMPANEYETS, M.*

KOMPANEYETS, M., nauchnyy sotrudnik; OZERSKIY, A., nauchnyy sotrudnik.

~~High-economy~~ gasoline engines with fuel-spray ignition. Za rul.  
14 no. 8:14-15 '56. (MIRA 10:9)

1. Nauchno-issledovatel'skiy avtomotornyy institut.  
(Automobiles--Ignition)



KOMPANEYETS, O. S. [Kompaniets', O. S.]

Gravitation, space, time. Dos. such. fiz. no. 6:155-164  
'62. (MIRA 16:1)

(Gravitation) (Space and time)

KOMPANIYETS, T.M.; SHMONIN, M.A.

New developments in research. Stal' 25 no.3:231 Mr '65.  
(MIRA 18:4)

KOMPANEETS, V. I.

Oxidation of oils of *Gossypium herbaceum* and *Dracocephalum moldavica* L. at high temperature. A. K. Erisov and V. I. KOMPANEETS. *J. Applied Chem.* (U. S. S. R.) 12, 934-43 (in French, 1939) (1939).—In the oxidation products of *Gossypium* oil were found large amts. of free acids, alcs, and peroxides. *Dracocephalum* oil yielded less of these oxidation products. The best temp. for oxidation was 400-600°. The *Dracocephalum* oil oxidized at high temp. yielded a product which dried rapidly on the air.  
A. A. Podgorny

27

KOMPANEYETS, V. I.

20554 KOMPANEYETS, V. I. O sposobe polucheniya elaidinovoy kisloty. Trudy  
krashodarsk in-ta pishch. Prom-sti, vyp. 4, 1948, s. 51-55.

SO: LETOPIS ZHURNAL STATEY - Vol. 28, Moskva, 1949

KOMPANEYETS, V. P.

(DECEASED)

1963/2

ca 1961

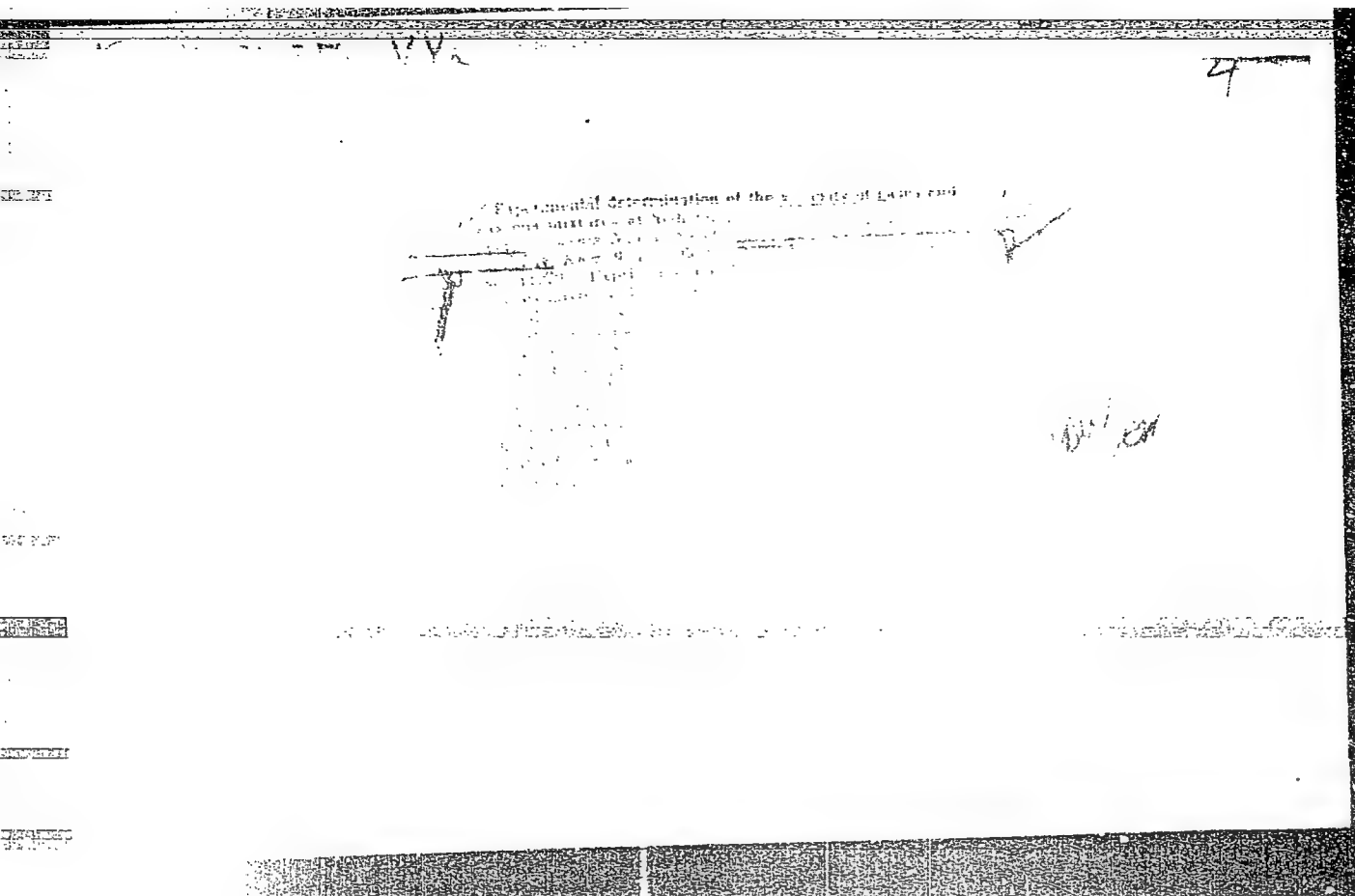
GEOLOGY-  
mining

see ILC

DAVYDOV, I.I., inzh.; NUZDANOV, V.F., inzh.; KOMPANEYETS, V.P., inzh.

Ways for preventing the weakening of the pole cores of diesel  
traction engines. Elek. i tepl. tiaga 7 no.9:15-16 S '63.  
(MIRA 16:10)

1. Depo Petropavlovsk Yuzhno-Ural'skoy dorogi.



KOMPANEYETS, V.YA.

M.

USSR/Cultivated Plants - General Problems.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 15467

Author : V.Ya. Kompaneyets, M.P. Fedoseyeva

Inst : Leningrad Agricultural Institute.

Title : The Effect of Subjecting Crop Seeds to Electrical Discharge Before Sowing.  
(Vliyaniye predposevnykh vozdeystviy elektricheskim razryadom na semena sel'skokhozyaystvennykh kul'tur).

Orig Pub : Zap. Leningr. s.-kh. in-ta, 1956, 12, 222-225

Abstract : Research in the nature of a preliminary survey of the effect of electrical discharge on wheat and corn seed quality after harvesting was performed at the Leningrad Agricultural Institute in 1954-1955. Holding the seeds in an electrical field with 50 kw voltage for 40 seconds to 1½ minutes increased germination by 15-20% and the wheat grain yield by 10-40%.

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KOMPANEYETS, VLADIMIR YAKOVLEVICH

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000824120016-7

RUDAKOV, Viktor Vasil'yevich, kandidat tekhnicheskikh nauk; PROZOROV, Vladimir Yakovlevich, kandidat tekhnicheskikh nauk; MERKUCHEV, Dmitriy Antonovich, inzhener; SHUSTOV, V.A., dotsent, redaktor; FAYNBERG, Ye.P., redaktor; MOLODTSOVA, N.G., tekhnicheskiy redaktor

[Electric machines and automobile and tractor electric equipment]  
Elektricheskie mashiny i avtotraktornoe elektrooborudovanie. Pod  
obshelei red. V.A.Shustova i V.V.Rudakova. Moskva, Gos. izd-vo  
sel'khoz. lit-ry, 1957. 302 p. (MLRA 10:6)

(Electric machines)  
(Tractors--Electric equipment)  
(Automobiles--Electric equipment)



J

COUNTRY : USSR  
 CATEGORY : Soil Science. Fertilizers

ABS. JOUR : Ref Zhur-Biologiya, No. 5, 1959, No. 20086

AUTHOR : Barkan, Ye.G.; Kompaneys, Ye. Yu.  
 INST. : Altay Agric. Inst.  
 TITLE : Distribution of Granulated Superphosphate in the Arable Horizon with Terracing and Non-terrace Plowing

ORIG. PUB.: Tr. Altaysk. s.-kh. in-ta, 1957, vyp. 5, 106-110

ABSTRACT : Experimenting in 1956 on the fruit and berry West Siberian Experiment Station granulated superphosphate mixed with radioactive  $P^{32}$  was broadcast in May while terrace plowing was 20-24 cm deep and also non-terrace plowing (per Mal'tsev) 35-40 cm was followed by a seedling of foxtail millet. In July a measurement of the radioactive phosphate distribution in relation to the soil profile showed that in terrace plowing most of the superphosphate

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CARD: 2/3

8(0)

AUTHORS:

SOV/105-59-3-23/27  
Kompaneyts, L. G., Sinitskiy, L. A., Candidate of Technical Sciences

TITLE:

Determination of the Mean Values of Nonsinusoidal Currents Containing Second or Third Harmonics (Opredeleniye srednikh znacheniy nesinusoidal'nykh tokov pri nalichii vtoroy ili tret'yey garmoniki)

PERIODICAL:

Elektrichestvo, 1959, Nr 3, pp 93 - 94 (USSR)

ABSTRACT:

The mean value of a.c. quantities (current or voltage) is determined by an equation of the following form:

$$x_{cp} = \frac{1}{T} \int_0^T |x(t)| dt, \text{ where } T \text{ denotes the period of the}$$

function  $x(t)$ . A number of electrical measuring instruments responds only to this mean value which is also of interest in the calculation of rectifier circuits. If the alternating currents are non-sinusoidal, the determination of  $x$  is connected with difficult calculations as it is therefore

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Determination of the Mean Values of Nonsinusoidal Currents SOV/105-59-3-23/27  
Containing Second or Third Harmonics

necessary to find the roots of the transcendent equation  $x(t) = 0$ . For this reason it would be desirable to have diagrams giving the mean value of the harmonics contained in  $x(t)$  as a function of amplitude and phase angle. The respective diagrams for the case where  $x(t)$  contains the second and third harmonic are presented in this paper. Its application is described and elucidated by an example. There are 2 figures.

ASSOCIATION: Institut mashinovedeniya i avtomatiki AN USSR (L'vov)  
(Institute of Machine Building and Automation AS UkrSSR (L'vov))

Card 2/2

KOMPANEYTSEV, N. A

KOMPANEJCEV, N.

Aluminothermic welding of rails. p. 639.  
(Tehnika, Vol. 12, no. 4, 1957. Beograd, Yugoslavia)

SO: Monthly List of East European Accessions. (EEAL) LC. Vol. 6, No. 7.  
July 1957. Uncl.

Kompaney Tsev, N.A.

PHASE I BOOK EXPIRATION NOV/28/77 NOV/26-M-20

Academy of Sciences USSR, Ural'skiy filial. Institut fiziki metallov  
Trudy, vyp. 20 (Transactions of the Institute of the Physics of  
Metals, Ural Branch, Academy of Sciences USSR, No. 20) Sverd-  
lovsk, 1958. 402 p. Article slip inserted. 1,000 copies  
printed.

Resp. Eds.: S.V. Voznyak, Corresponding Member, Academy of  
Sciences USSR, and V.I. Arkharov, Doctor of Technical Sciences.  
PURPOSE: This book is intended for scientists working in the field  
of physical metallurgy.

COVERAGE: This is a collection of 28 articles written by members of the  
Institute of the Physics of Metals, Ural Branch of the Academy of Sciences  
USSR, on problems investigated at the Institute. Studies at the  
Institute have concentrated on two basic problems: 1) developing  
a theory of metals and alloys and finding ways to improve the  
properties of engineering materials; and 2) developing new phys-  
ical methods for investigating and controlling the quality of  
materials and metal articles. In connection with these basic  
problems the articles in this collection treat the following sub-  
jects: problems of multielectron quantum-mechanical theory  
of solids; the theory of distribution and diffusion of atoms  
in various types of metallic alloys (internal adsorption theory); strength  
and plasticity of polycrystalline materials in relation to inter-  
atomic binding forces, distortions in the lattice; struc-  
tural theory of diffusion reaction, i.e., the magnetic structure  
of ferromagnetic substances; theory of the heat treatment of  
steel; and the physical theory of magnetic measurements (magnetic  
flaw detection and stress analysis). The first article gives  
a description of the work being done by the Institute and a list  
of departments and laboratories along with their chief personnel.  
Several persons are cited for their work at the Institute. Refer-  
ences accompany each article.

Kedonov, E.P. Effect of High Pressure on Some Physical Properties of Solids	273
Rykov, M.M. Investigation of Decomposition in Supersaturated Metallic Solid Solutions	283
Gidovskiy, V.D. Structural Mechanism of Phase Over-Crystallization During the Heating of Steel	303
Gorbach, V.O. and V.D. Sadovnik. Effect of Preliminary Heat Treatment of Steel on the Transformation Kinetics of Supercooled Austenite	311
Kompaneytsev, N.A. and V.D. Sadovnik. Correcting the Structure of the Structure of Heat Through Heat Treatment	329
Kalashov, I.A., K.A. Poroshina, I.A. Mirzaliyeva, Strengthening of Martensite Alloys by Means of Phase Hardening	339
Rodigin, E.M. High-Speed Heating for Investigating Electrothermal Treatment and Other Purposes	349
Bibliography of Works by Members of the Institute of the Physics of Metals, Ural Branch of the Academy of Sciences USSR for the Years 1952-1958	357
AVAILABLE: Library of Congress (T607.A4)	
Card 6/6	

74/dec/78  
8-2-80  
228

SOV/137-59-5-11397

Translation from: Referativnyy zhurnal, Metallurgiya, 1959, Nr 5, p 273  
(USSR)

AUTHORS: Kompaneytsev, N.A., Sadovskiy, V.D.

TITLE: Correcting the Structure and Fracture of Cast Alloyed Steel by Heat Treatment

PERIODICAL: Tr. In-ta fiz. metallov. Ural'skiy fil. AS USSR, 1958, Nr 20, pp 329 - 338

ABSTRACT: The author establishes the presence of a particular critical temperature in the austenite range at which recrystallization of austenite, hard-faced during the  $\alpha \rightarrow \gamma$  transition, takes place. The secondary intergranular texture, determining the structural heredity of the coarse grains of cast steel, is fully destroyed at this temperature. The heating conditions as a means to prevent hereditary coarse grains of textural character depend on the initial structure of cast steel. In the case of ferrite-perlite or perlite-troostite structures, single-stage heating above the critical points is sufficient to correct the structure and fracture.

Card 1/2

SOV/137-59-5-11397

Correcting the Structure and Fracture of Cast Alloyed Steel by Heat Treatment

In the case of initial acicular structures, the heating rate influences considerably the effect of heat treatment. The degree of revealing fracture defects of the structural character depends on the tempering conditions and on the proneness of the steel to temper brittleness. Intermediate heating rates produce textured fine-grained austenite, whose recrystallization at higher heating temperatures ensures complete correction of the break structure. There are 11 bibliographical titles.

M.Ch.

Card 2/2

S/126/60/009/01/005/031  
E111/E191

AUTHORS: Varskaya, A.K., Kompaneytsev, N.A., Sokolov, B.K.,  
and Sadovskiy, V.D.

TITLE: X-Ray Investigation of Phase Recrystallization during  
Heating of Steel

PERIODICAL: Fizika metallov i metallovedeniye, 1960, Vol 9, Nr 1,  
pp 28-30 (USSR)

ABSTRACT: It has been reported (Refs 1, 2) that metallographic investigation of phase recrystallization during heating of some structural alloy steels, which have in their initial state a crystallographically ordered structure of martensite or bainite, showed that heating rates influence austenite structure formed above  $Ac_3$ . The object of the present investigation was to check this effect by X-ray diffraction and also the reported (Ref 3) existence of intragranular texture in the austenite at intermediate heating rates. An axial camera with unfiltered iron radiation was used, with a special holder to ensure that the same spot was photographed before and after the selected heat treatment. Commercial steels type 40KhS, 35KhGS and 37KhN3A previously hardened from 1300 °C were used; parallel

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CIA-RDP86-00513R000824120016-7"

S/126/60/009/01/005/031  
E111/E191

X-Ray Investigation of Phase Recrystallization during Heating of  
Steel

tests were made on the same steels in the cast state (hardened immediately after solidification). Slow-heating was effected in vacuum. With slow-heating directly above  $Ac_3$  all the original texture maxima are reproduced in the X-ray diagrams (Fig 1 a-6), but new orientation appears if the heating is at 50-80 °C and more above  $Ac_3$ . Very rapid heating of untempered steel similarly restores (above  $Ac_3$ ) the original grain with slightly redistributed orientations (Fig 2 a-6) and the texture disappears if the temperature is high enough for austenite recrystallization. With intermediate heating rates the austenite grains obtained above  $Ac_3$  are generally considerably finer than originally and have a different and weaker texture (Fig 3 a-6), the same effect being obtained with very rapid heating of tempered specimens. At temperatures of 1100 °C and over texture disappears. This work was reported at the VI Vsesoyuznoye nauchno-tekhnicheskoye soveshchaniye po Primeneniyu rentgenovskikh luchey k issledovaniyu materialov (All-Union Scientific-Technical Conference on

Card  
2/3

S/126/60/009/01/005/031  
E111/E191

X-Ray Investigation of Phase Recrystallization during Heating of  
Steel  
the Use of X-rays for Materials Testing), June 24, 1958.  
There are 3 figures and 5 Soviet references.

ASSOCIATION: Institut fiziki metallov AN SSSR  
(Institute of Physics of Metals, Acad.Sci. USSR)

SUBMITTED: July 25, 1959

Card 3/3



SADOVSKIY, V.D.; BOGACHEVA, G.N.; SMIRNOV, L.V.; SOROKIN, I.P.; KOMPAHEVTSYEV,  
H.A.

Investigating phase recrystallization in titanium. Fiz. met. i  
metalloved. 10 no.3:397-403 S '60. (MIRA 13:10)

1. Institut fiziki metallov AN SSSR.  
(Titanium--Metallography)  
(Phase rule and equilibrium)

1. KOMPANEY TSEVA, I. S.
2. USSR (600)
4. Viticulture
7. Delaying the opening of grapevine buds. Vin. SSSR 13, No. 4, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953. Unclassified.

ABDRAKHMANOV, K.A.; KOMPANEYTSSEV, V.P.

Geology, petrography, and genesis of alkali effusives in  
Chimkent Province and prospects for practical usage of them.  
Trudy Inst.geol.nauk AN Kazakh.SSR 12:3-24 '65. (MIRA 18:9)

KOMPANIONI, Zh. I.

Method of manufacturing thin-walled arched reinforced concrete  
elements of the prismatic fold type. Trudy GPI [Gruz.] no. 4:  
83-95 '63. (MIRA 17:5)

KOMPANIONI, Zh.I.

BETANELI, I.D., kandidat tekhnicheskikh nauk; MONTSELIDZE, M.A., inzhener;  
KOMPANIONI, Zh.I., inzhener; CHOGBADZE, G.I., inzhener; MGBRISHVILI, I.M.,  
inzhener; NEMSAZE, M.I., inzhener.

Use of belt conveyers for transporting concrete mixtures. Gidr.stroi. 22  
no.8:1-5 Ag '53. (MIRA 6:8)

(Concrete--Transportation)

KOMPANIONI, Zh.I.

Experimental study of deformations in reinforcements accompanying the operation of bending during the manufacture of polygonal arched reinforced concrete elements. Trudy GPI [Gruz.] no.1:51-54 '63.  
(MIRA 18:2)

KOMPANIONI, Zh. I.

BETANELI, I.D., kandidat tekhnicheskikh nauk; KOMPANIONI, Zh.I.,  
inzhener; MOBERISHVILI, I.M., inzhener; KONTSELIJZE, M.A., in-  
zhener; NEMSAJZE, M.I., inzhener; CHOGOVADZE, G.I., inzhener.

Standard prefabricated concrete plant with two S-158 concrete  
mixer. Elek. sta. 25 no.6:48-49 Je '54. (MLBA 7:7)  
(Concrete) (Mixing machinery)

KOMPANIYETS, A.D.

Reed reinforcement for concrete building details. Stroi.  
mat. 7 no.7:12-13 JI '61. (MIRA 14:7)

1. Rukovoditel' laboratorii Krasnodarskogo filiala Nauchno-  
issledovatel'skogo instituta sel'skogo stroitel'stva.  
(Reed products) (Concrete reinforcement)



KOMPANIYETS, A.I.

Determining the effective radius of dispersing particles in the  
atmosphere up to the altitudes of 17 and 27 kilometers. Izv. AN  
SSSR. Ser. geofiz. no.11:1708-1710 N '61. (MIRA 14:11)  
(Light--Scattering)

KOMPANIYETS, A.I.

Aerosol indicatrixes of light scattering in the free atmosphere  
at heights of about 10 km. Izv. AN SSSR. Fiz. atm. i okeana 1  
no.3:335-338 Mr '65. (MIRA 18:5)

39671

S/056/62/043/001/033/056  
B104/B102

26.5300  
AUTHORS: Kompanyets, A. S., Lantsburg, Ye. Ya.

TITLE: Propagation of a nonequilibrium heat wave taking into account the finiteness of light velocity

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 1(7), 1962, 234 - 240

TEXT: The quasisteady conditions of heat wave propagation in an opaque cold gas through radiation are studied. The heat transmission equation  $\partial I / \partial t + \mu \partial I / \partial x + kI = kcU/4\pi$  describes the radiation state in the surface layer of the heated region.  $I(x, t, \mu)$  is the integral radiation intensity,  $\mu$  the cosine of the angle between the propagation direction of the ray and the x-axis,  $k(x, t)$  the radiation absorption coefficient;  $U = aT^4$  is the equilibrium density of the radiation energy. The "forward" and "backward" radiation, related to the propagating surface of the hot region, is studied. At first, the gas within the heated region is not in equilibrium with radiation, and it is transparent for radiation. A thin layer between the transparent hot gas and the totally opaque cold gas is of decisive importance. In diffusion approximation, the balance between  
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B104/B102

Propagation of a nonequilibrium...

radiation and absorption in this layer is described by taking account of the finiteness of light velocity  $c$ . The velocity  $v$  of the boundary of the hot region is determined for the case when the nonequilibrium energy density  $U_1$  of the radiation in the transparent region is much greater than the equilibrium density of energy emission at the boundary.  $v$  proves to be always smaller than  $c/\sqrt{3}$ , irrespective of the value of  $U_1$ . There is 1 figure. ✓

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics of the Academy of Sciences USSR)

SUBMITTED: February 19, 1962 (initially),  
March 30, 1962 (after revision)

Card 2/2



SOV/128-59-10-20/24

25(5)

AUTHORS: Garkusha, I.T., Krongauz, A.I., and Kompaniyets, B.Ya., Engineers

TITLE: Scientific and Technical Conference on Progressive Technology of Pattern Production

PERIODICAL: Liteynoye proizvodstvo, 1959, Nr 10, pp 45-46 (USSR)

ABSTRACT: In December, 1958 a conference on progressive technology of pattern production convened in Khar'kov. The conference was organized by the section for foundry production of the district scientific and technical society for machine production, together with the Khar'kovskiy sovnarkhoz (Khar'kov Sovnarkhoz). About 300 chairmen from different technical organizations of the Khar'kov district, from Moscow, Kiev, Kramatorsk, Zhdanov, Minsk, Dnepropetrovsk, Rostov and other places were present. Lectures were given by: V.S. Sergeyev, R.L. Kharakhash'yan, G.A. Poyedintsev (KhTZ), M.S. Shapiro ("Tsentrolit" in Tbilisi), Yu.M. Buri-Durimskiy (Minsk Tractor Factory), N.P. Kamyshan, M.K. Omel'chenko, I.I. Sychev, V.G. Kaprov, P.S. Afanas'yev (NIIDrevmash), Ya.V. Lyamin, S.N. Chashchegorov, B.A. Bychkov (KhEMZ), S.Ye. Rozenfel'd, S.F. Simma (UkrGIPROMASH) and A.A. Shturman.

Card 1/1

ALEKSAKHIN, I.V.; KOMPANIYETS, E.P.; KRASOVSKIY, A.A.

Space routes of 'diurnal' artificial earth satellites. Kosm. issl.  
2 no.4:532-538 J1-Ag '64. (MIRA 17:9)

KOMPA NIYETS, F. P.

USSR/Engineering - Hydroplastics

Card 1/1 : Pub. 12 - 16/16

Authors : Lutsevich, V. I.; and Kompaniets, F. P.

Title : Equipment using hydroplastic filling-materials

Periodical : Avt. trakt. prom. 6, insert between pages 24-25, June 1954

Abstract : The editorial gives some information concerning use of hydroplastic filling-materials in the DT-54 automobile-engine. The filling material is composed of vinyl-polychloride, dibutyl-phtholate, calcium stearate, and transformer oil. General description of its use and preparation is presented. Drawings.

Institution : .....

Submitted : .....



KOMPANIYETS, F. P.

USSR/ Engineering - Machine tools

Card 1/1 Pub. 103 - 17/24

Authors : Kompaniets, F. P.

Title : Expanding mandrel with retractable thrust-journal

Periodical : Stan. i instr.<sup>25</sup> 11, page 34, Nov 1954

Abstract : Brief report is presented on the employment of an expanding mandrel with retractable thrust-journal for the machining of bushings. The mode of operation of this mandrel is briefly described. Drawings.

Institution : ...

Submitted : ...

18.7530

28543

S/133/61/000/007/004/017  
A054/A129

AUTHORS: Kompaniyets, G. M., Shmonin, I. A., Engineers

TITLE: News in brief

PERIODICAL: Stal', no. 7, 1961, 610

TEXT: 1) In the Nizhne-Tagil'skiy metallurgicheskiy kombinat (Nizhne-Tagil' Metallurgical Plant) tests were carried out to replace ferrochrome by chrome ore in melting rimming steel for roofing sheets. In order to reduce the sticking-together of thin sheets rolled in packs, ferrochrome in an amount to ensure 0.20 - 0.25% Cr in the finished product is added to the bath of CT2KH (St.2kp) steel. Ferrochrome could suitably be replaced by chrome-containing iron ore from the Saranovo deposit, which is added for 30 - 40 minutes until the end of rimming. Recovery of 20 - 30% Cr from the ore saves 3 rubles per ton; however, melting with ore takes 10 - 13 minutes longer than the conventional process. 2) 09Г2 (09G2) steel was usually deoxidized in the ladle with 18 kg/t electro-manganese and 4 kg/t 75% ferrosilicon. The consumption of rare electro-manganese could be reduced to 8 kg/t by adding a corresponding amount of silico-manganese and 1 kg/t 75% ferrosilicon. When a smaller amount of electro-manganese is added, the manganese may

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News in brief

28543

S/133/61/000/007/004/017  
A054/A129

not be properly distributed over the entire volume of the ladle. 3) The effect of processing iron with nitrogen on the properties of iron was studied. Blowing of nitrogen gas through the iron in the ladle does not noticeably change the mechanical properties of the metal. When the melt is treated with atomic nitrogen, however (blowing ammonia through the bath), the mechanical properties of the metal improve by 40 - 50% and its hardness will increase from 140 to 270 H<sub>B</sub>. Instead of dark and coarse-grained, the fracture is bright and compact in its entire cross-section. The amount of graphite inclusions decreases. They become finely crushed and have a turbulent shape.

Card 2/2

S/133/61/000/007/016/017  
A054/A129

AUTHORS: Kompaniyets, G. M., Shmonin, I. A., Engineers

TITLE: News in brief

PERIODICAL: Stal', no. 7, 1961, 648

TEXT: 1) In the Nizhne-Tagil'skiy metallurgicheskii kombinat (Nizhne-Tagil' Metallurgical Plant) the mechanical properties and rolling characteristics of three experimental batches of rails were studied. One batch (A) was modified with vanadium, another contained chrome-vanadium (B) and the third batch (C) consisted of Omsk-Khalilovo iron and contained chrome-nickel. The test-rails had the following composition:

	C	Mn	Si	P	S	Cr	Ni	V
A	0.55-0.65	0.7-1.0	0.17-0.28	0.035	0.04	-	-	0.15-0.3
B	0.35-0.45	0.7-1.0	0.17-0.28	0.035	0.04	2.5-3.2	-	0.1-0.2
C	0.65-0.75	0.8-1.1	0.20-0.37	0.040	0.04	0.5-0.6	0.5-0.7	-

The properties of rails "A" correspond with ГОСТ (GOST) 0706-59T (T), but the per-

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News in brief

S/133/61/000/007/016/017  
A054/A129

centage of first-grade product dropped by 2 - 3 compared with the conventional carbon steel rails. With regard to yield point and plasticity "A"-rails were better than the M75 (M75) type. The production of "B"-type rails involved considerable waste; their mechanical properties are similar to those of refined (hardened and annealed) carbon-steel rails, whereas the rails made of steel "C" were not satisfactory; they could not be heated uniformly, had many flaws and their macrostructure was inferior. 2) Industrial-scale tests were carried out in the Nizhne-Tagil' Plant to examine the volumetric hardening of rails. The test equipment consisted of a compartment furnace for rapid heating, fuelled by coke-gas and a mechanized hardening device. The metal was heated to  $910^{\circ} - 960^{\circ}\text{C}$ ; hardening took place at  $840^{\circ} - 880^{\circ}\text{C}$  in spindle oil with a maximum temperature of  $110^{\circ}\text{C}$  for 4 - 6 minutes; annealing lasted for 6 - 8 hours after hardening with a 2-hour holding time. After this treatment the metal displayed the following properties:

$\sigma_B$	$\sigma_s$	$\delta$	$a_k$	$d_B$
115 - 130 kg/mm <sup>2</sup>	75 - 95 kg/mm <sup>2</sup>	7 - 10%	3 - 5 kgm/cm <sup>2</sup>	3.1 - 3.5 mm

3) A method for producing colored metals was established in the Nizhne-Tagil' Plant. The method of producing components of different colors is based on the oxidation of the metal by the atmospheric oxygen upon heating to  $280^{\circ} - 600^{\circ}\text{C}$ . During this

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A054/A129

oxidation period, colored films are forming on the polished metal surface. The temperature at which these films appear on the various structural constituents are dependent on the chemical composition of the elements, their physical properties, the orientation of the crystals, etc. The conditions for colored pickling of carbon and alloyed steels have been established.

Card 3/3

KOMPANIYETS, G.M., inzh; SHMONIN, I.A., inzh.

Research at the Nizhniy Tagil Metallurgical Plant. Stal' 22  
no.10:891,910,937-938,953 0'62. (MIRA 15:10)  
(Nizhniy Tagil--Metallurgical research)

1 12848-63

EWK(k)/EWK(q)/EWK(m)/BDS

AFFTC/ASD Pf-4 JD/HW

ACCESSION NR: AP3001469

S/0133/63/000/005/0432/0432

AUTHOR: Smirnov, L. A.; Timonina, V. M.; Kompaniyets, G. M.; Korneyev, N. D.;  
Vinogradov, V. I.

TITLE: In the Ural Scientific Research Institute of Ferrous Metallurgy

SOURCE: Stal', no. 5, 1963, 432

TOPIC TAGS: steel top casting, chemical sealing, aluminum powder, rimmed steel

ABSTRACT: Aluminum powder was used as an aftercharge for the chemical sealing of 7-ton square ingots. It was added under the metal flow in the top casting process, 5-6 seconds before closing of the stopper. Steels 0.8, 10, 15, St. 2 and St. 3khz were used in the experiment to determine the consumption of aluminum powder. The amount of powder varied from 80 to 300 grams per ton depending on the carbon content; the best sealing was achieved in ingots with over 0.12% carbon. The rolling of chemically sealed steel gave better results than rolling rimmed steel of the same profile. A lower percentage of bloom trimmings, a higher production of first-grade steel, and a lower amount of rejected products were observed in the former type. Moreover, the chemical sealing improved working conditions in the pouring bay. Orig. art. has: 3 tables.

Card 1/2



L 12848-63

ACCESSION NR: AP3001469

ASSOCIATION: Ural'sky nauchno-issledovatel'skiy institut chernykh metallov;  
Nizhne-Tagil'sky metallurgicheskiy kombinat (Ural Scientific Research Institute  
of Ferrous Metals in collaboration with Nizhne-Tagilsk Metallurgical Combine)

SUBMITTED: 00

DATE ACQ: 10Jun63

ENCL: 00

SUB CODE: 00

NO REF SOV: 000

OTHER: 000

Card 2/2

FREYDENZON, Ye.Z.; UDOVENKO, V.G.; TOCHILLOV, Yu.V.; KOMPANIYETS, G.M.;  
TRET'YAKOV, M.A.; BARANOV, V.M.; NAGOVITSIN, D.F.; DONSKOY, E.A.;  
PASTUKHOV, A.I.

Mastering the operation of the oxygen-blown converter plant  
of the Nizhniy Tagil metallurgical combine. Stal' 25 no.6:  
534-537 Je '65. (MIRA 18:6)

1. Nizhne-Tagil'skiy metallurgicheskiy kombinat i Ural'skiy  
nauchno-issledovatel'skiy institut chernykh metallov.

VISLOGUZOV, G.I., inzh.; RABINOVICH, D.M., inzh.; ORLOVA, N.I., inzh.;  
SHM NIN, I.A., inzh.; KOMPANIYETS, G.M., inzh.; KONDRAT'YEV,  
S.N., inzh.; LOSHKINA, N.A., inzh.

Nonmetallic inclusions in rails in various methods of deoxidizing  
steel. Stal' 25 no.6:557-559 Je '65. (MIRA 18:6)

1. Nizhne-Tagil'skiy metallurgicheskiy kombinat.

FREYDENZON, Ye.Z., inzh.; KOMPANIYETS, G.M., inzh.; RABINOVICH, D.M., inzh.;  
ZATULOVSKAYA, Ye.Z., inzh.; SHCHETKINA, N.A., inzh.

Effect of the composition of the heat insulating material  
on the macrostructure of rails. Stal' 25 no.8:803-805 S '65.  
(MIRA 18:9)

1. Nizhne-Tagil'skiy metallurgicheskiy kombinat.

ANTONENKO, I. & KOMPANIYETS, I.

Contribution of sowing machinery builders to agriculture.  
Trakt. i sel'khoz mash. 31 no.10:30-31 0 '61. (MIRA 14:12)

1. Spetsial'noye konstruktorskoye byuro Kirovogradskogo zavoda  
sel'skokhozyaystvennogo mashinostroyeniya "Krasnaya zvezda".  
(Planters (Agricultural machinery))

KOKUSHKIN, D.P.; FREYDENZON, Ye.Z.; KOMPANIYETS, I.A.; SHMONIN, G.M.; LEBEDEV, A.A.; ZATULOVSKAYA, Ye.Z.; ~~Prinimali~~ uchastiya: DUBROV, N.F.; PASTUKHOV, A.I.; ISAYEV, N.I.; STAROSELETSKIY, M.I.; AKSEL'ROD, L.M.

Improving the quality of a faceted ingot by changing the shape of its side surfaces. Stal' 25 no.7:610-612 J1 '65. (MIRA 18:7)

1. Ural'skiy nauchno-issledovatel'skiy institut chernykh metallov  
i Nizhne-Tagil'skiy metallurgicheskiy kombinat.

IVASYUTA, Mikhail Kirillovich; KOMPANIYETS, I.I. [Kompaniets', I.I.],  
otv.red.; AGUF, M.A. [Ahuf, M.A.], red.

[Development of collective farming in the Western Ukraine]  
Rozvitok kolhospnoho ladu v zakhidnykh oblastiakh Ukraini'koi  
RSR. Kyiv, 1960. 37 p. (Tovarystvo dlia poshyrennia politychnykh  
i naukovykh znan' Ukraini'koi RSR. Ser.1, no.29).

(MIRA 14:1)

(Ukraine, Western--Collective farms)

ANTONENKO, I.; KOMPANIYETS, I. [Kompaniets', I.]

New planters for farm fields. Mekh. sil'. hosp. 12 no. 3:31-32 Mr '61.  
(MIRA 14:4)

1. Glavnyy konstruktor zavoda "Chervona zirka" (for Antonenko).
2. Nachal'nik grupi SKB zavodu "Chervona zirka" (for Kompaniyets).  
(Planters (Agricultural machinery))



KOMPANIYETS, L.

~~SECRET~~

Changing the procedure of issuing sugar-beet seeds. Sakh.prom.  
30 no.1:34-35 Ja '56. (MLRA 9:6)

1.Kirovogradskiy sakhsveklotrest.  
(Sugar beets)

SOV/136-58-8-11/27

AUTHOR: Kompaniyets, M.F.

TITLE: Influence of Mineralogical Composition and Structural Features of Bauxite on its Behaviour in the Bayer Process (Vliyaniye mineralogicheskogo sostava i strukturnykh osobennostey boksita na ego povedeniye v protsesse Bayera).

PERIODICAL: Tsvetnyye Metally, 1958, Nr.8, pp.50-52 (USSR)

ABSTRACT: The author discusses first the leaching of bauxite, considering how the degree of solution of the alumina depends on the fineness of grinding of the bauxite, the form of the alumina minerals and the presence of certain impurities in the bauxite. He explains the inhibiting action of lime by the formation of  $3\text{CaO} \cdot \text{Al}_2\text{O}_3 \cdot 6\text{H}_2\text{O}$ . Titanium dioxide in bauxites is present in a microcrystalline plate form which inhibits solution. Diaspore bauxites having no calcite and titanium-dioxide adsorbing impurities to remove the dioxide film are difficult to leach without lime additions. The solution of bauxite is preceded by the breakdown of aggregates, which, as well as solution itself, is facilitated by fine grinding. The author con-

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SOV/136-58-8-11/27

Influence of Mineralogical Composition and Structural Features of Bauxite on its Behaviour in the Bayer Process.

siders next the settling of red slime. This requires aggregation which depends on the excess surface energy (directly related to specific surface) and also on the settling velocities of particles being different (increasing collision frequency). With 10% SiO<sub>2</sub> settling is hindered because of the strongly hydrophylic nature of the colloid formed. Iron oxides behave differently but hydroxide iron hinders settling, as does the active form of titanium dioxide without lime addition.

ASSOCIATION: Ural'skiy aluminiyevyy zavod (Ural Aluminum Plant)

1. Bauxite--Physical properties
2. Bauxite--Structural analysis
3. Bauxite--Impurities
4. Bauxite--Test results

Card 2/2

AUTHORS: Kompaniyets, M.F. and Tatarskiy, V.B. SOV/136-58-10-14/27

TITLE: On the Mechanism of the Formation of Grains by Technical Aluminium Hydroxide (O mekhanizme obrazovaniya zeren tekhnicheskoy gidrookisi alyuminiya)

PERIODICAL: Tsvetnyye Metally, 1958, Nr 10, pp 67 - 69 (USSR)

ABSTRACT: The author examined specimens of technical aluminium hydroxide from the Ural' Alumina Works and the Tikhvin Alumina Works with the aid of a polarising microscope, using thin sections. They conclude that the material consists mainly of spheroidal aggregates which are for the most part coarsely crystallised. The aggregates show characteristic growth directions from a common centre - they are not crystal aggregates formed by collision; occasionally two-centre aggregates are found. The structure of the technical hydroxide suggests that although they are made up of separate single crystals, this is the result of their having grown from a poly-crystalline nucleus and not of reaction during collision between independently growing crystals. The hydroxide crystals are mostly deformed, the degree of deformation being less for the large grains than for crystals in the small and

Card1/2

On the Mechanism of the Formation of Grains by Technical Aluminium Hydroxide SOV/136-58-10-14/27

medium fractions: the latter thus have a higher internal and surface energy. The hydroxide structure was found to be non-uniform, with deleterious intra-crystalline inclusions of mother-liquor.

There are 2 figures and 5 references, 4 of which are Soviet and 1 German.

ASSOCIATIONS: Ural'skiy alyuminiyevyy zavod (Ural Aluminium Works) and Leningradskiy gosudarstvennyy universitet (Leningrad State University)

Card 2/2

KOMPANIYETS, M.F., Cand Tech Sci -- (diss) "Crystallooptical  
study of ~~Electrolites~~ of aluminum electrolyzers." Sverdlovsk,  
1959, 19 pp (Min of Higher Education USSR. Ural Polytechnical  
Inst im S.M. Kirov) 150 copies (KL, 28-59, 127)

- 64 -

5(2)

PHASE I BOOK EXPLOITATION

SOV/2312

Kompaniyets, Mariya Fedorovna

Kristalloopticheskiy analiz v alyuminiyevom proizvodstve (Optical Crystal Analysis in Aluminum Production) Moscow, Metallurgizdat, 1959. 179 p. Errata slip inserted. 2,000 copies printed.

Reviewer: P. G. Yelizarov; Ed.: A. I. Belyayev; Ed. of Publishing House: L. M. El'kind; Tech. Ed.: P. G. Islent'yev.

PURPOSE: This manual is intended for technicians of plant laboratories using optical crystal analysis, as well as for plant personnel and researchers of the aluminum industry.

COVERAGE: The author presents data on crystal optics and suggests practical methods for independent investigations with a microscope, and for quantitative and qualitative analysis of materials. He describes the method of optical crystal analysis developed at the Ural'skiy alyuminiyevskiy zavod (Ural Aluminum Plant), and the instruments used in this analysis. He also gives the results of research on determining the industrial properties of raw materials,

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Optical Crystal Analysis (Cont.)

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alumina (Bayer process), and aluminum. This is the first printed manual on the subject of optical crystal analysis. The author thanks V. B. Tatarskiy, Doctor of Geological and Mineralogical Sciences; A. A. Kostyukov, Candidate of Technical Sciences; A. K. Sharova, Candidate of Geological and Mineralogical Sciences; G. A. Abramov, Professor, Doctor; S. I. Beneslavskiy, Candidate of Geological Sciences; and P. S. Kusakin, Candidate of Technical Sciences. There are 48 references, all Soviet.

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Optical Crystal Analysis (Cont.)

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Optical Crystal Analysis (Cont.)

Determining the texture and structure of bauxite

Obtaining bauxite dehydration curves

Quantitative determination of opal in bauxite (for diasporic bauxite)

AVAILABLE: Library of Congress

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Card 5/5

BLINKINA, B.Ya.; KROPOTINA, V.F.; PECHENKIN, N.M.; KOMPANIYETS, M.F.

Discussion of S.I.Lainer's book "Alumina production" at the  
Bogoslovskii and Ural Aluminum Plants. TSvet. met. 36 no.7:  
91-92 J1 '63.

(MIRA 16:8)

(Aluminum oxide)

KOSTYUKOV, A.A.; KOMPANIYETS, M.F.

Determining the molar ratio  $\text{NaF}:\text{AlF}_3$  in the electrolytes of  
aluminum electrolytic cells containing magnesium fluoride.  
Zhvt. met. 38 no. 12:52-54 D '65 (MIRA 19:1)

KOMPANIYETS, N.D.; HUSAKOV, A.M., otv.red.; PEVZNER, A.S., zav.red.  
izd-va; KL'KINA, N.M., tekhn.red.

[Uniform time and pay standards for construction, assembly, and repair operations in 1960] Edinye normy i rastsenki na stroitel'nye, montashnye i remontno-stroitel'nye raboty, 1960 g. Moskva, Gos.izd-vo lit-ry po stroit., arkhitekt. i stroit.materialam. Sbornik 6. [Carpentry and cabinetwork] Plotnichnye i stoliarnye raboty. No.1. [Wooden construction elements of buildings and structures] Dereviannye konstruktsii zdani i sooruzhenii. 1960. 47 p. (MIRA 13:6)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po delam stroitel'stva. 2. Normativno-issledovatel'skaya stantsiya (NIS) pri treste Dneprovskpromstroy (for Kompaniyets).  
(Wages) (Building, Wooden)

ANTIPIN, V.I.; BUDANOV, N.D.; KOTLUKOV, V.A.; LEYBOSHITS, A.M.;  
 PROKHOROV, S.P., kand.geol.-miner.nauk; SIRMAN, A.P.;  
 FALOVSKIY, A.A.; SHTEYN, M.A.; BASKOV, Ye.A.; BOGATKOV,  
 Ye.A.; GANEYEVA, M.M.; ZARUBINSKIY, Ya.I.; IL'INA, Ye.V.;  
 KATSIYAYEV, S.K.; KOMPANIYETS, N.G.; NELYUBOV, L.P.;  
 PONOMAREV, A.I.; REZNICHENKO, V.T.; RILEV, N.A.; TSELIGOROVA,  
 A.I.; ALSTER, R.K.; SHVETSOV, P.F.; VYKHODTSEV, A.P.; KOTOVA,  
 A.I.; KASHKOVSKIY, G.N.; LOSEV, F.I.; ROMANOVSKAYA, L.I.;  
 PROKHOROV, S.P.; MATVEYEV, A.K., dots., retsenzents; CHEL'TSOV,  
 M.I., inzh., retsenzents; KUDASHOV, A.I., otv. red.; PETRYAKOVA,  
 Ye.P., red. izd-va; IL'INSKAYA, G.M., tekhn. red.

[State of flooding and conditions for the exploitation of coal-  
 bearing areas in the U.S.S.R.] Obvodnennost' i usloviya eksplu-  
 atatsii mestorozhdenii ugol'nykh raionov. Pod nauchn. red.  
 S.P.Prokhorova. Moskva, Gosgortekhzdat, 1962. 243 p.

(MIRA 15:7)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut gidro-  
 geologii i inzhenernoy geologii. 2. Kafedra geologii i geo-  
 khimii goryuchikh iskopayemykh Moskovskogo Gosudarstvennogo  
 universiteta (for Matveyev).

(Coal geology) (Mine water)

KEYS, N.V.; SINITSYN, A.A.; POZDNYSHCHEV, V.M.; SAMARIN, A.P.; YARTSEVA, T.M.;  
Prinimali uchastiye: BENDOVSKIY, B.M.; CHUTCHEV, I.I.; KOMPANIYETS, N.V.;  
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(Iron founding)

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L 23123-66 EWT(m)/EMP(j)/T/EMP(t)/ETC(m)-6 IJF(c) JD/WG/RM

ACC NR: AP6009492

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AUTHOR: Natanson, E.M.; Khimchenko, Yu.I.; Kompaniyets, V.A.

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B

ORG: Institute of General and Inorganic Chemistry, AN UkrSSR (Institut obshchey i neorganicheskoy Khimii AN UkrSSR)

TITLE: Metallopolymers based on epoxy resins and colloid copper

SOURCE: AN SSSR. Doklady, v.167, no.1, 1966, 128-131

TOPIC TAGS: polymer chemistry, epoxy plastic, copper compound

ABSTRACT: The starting materials for the experiments were copper formate and ED-5 epoxy resin, in compositions with 5, 10, 20, 30, 40, and 50% copper (calculated as metallic copper). It was established that decomposition of the copper formate occurs at a temperature of 186-190°. The article gives thermograms with differential curves for epoxy resin with different copper contents. At a temperature of 190° (the decomposition temperature of copper formate) there is a well marked exothermic effect, the intensity of which increases with the copper concentration. It was established that the reinforcing of an epoxy resin with colloid copper is accompanied by a decrease in the content of epoxy groups. Thus, the residual content of epoxy groups in the sample with 30% copper,

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UDO: 54-126 + 678.643'42'5

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ACC NR: AP6009492

after heating for 2 hours at 210°, was 16% of the original content. The interreaction of an epoxy resin with colloid copper can lead to the formation of the corresponding macromolecules. Experiments were carried out to explore the possibility of using the method of electron paramagnetic resonance to study the reactions of epoxy resin with colloid copper particles at the moment of their formation, by the thermal method. The investigations were made on a PE1301 apparatus in the temperature interval from 20 to 300°. Based on the results of these experiments, the article gives curves showing the change in the concentration of the radicals formed as a function of temperature, and the kinetics of the formation of the radicals at 230°. Orig. art. has: 3 figures.

SUB CODE: 07/ SUBM DATE: 09Jun 65/ ORIG REF: 006/ OTH REF: 005

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2/2 BK

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